DRUGS FROM THE CONGO

BY

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In a former article* I have described some of the native African Drugs in the Museum of the University of Liverpool and spoken of the importance of a closer study of the remedies which have been in use among the natives, perhaps for centuries, for the treatment of disease.

MOUÏNDU OR MUINDU

On July 19th, 1906, I received from Mr. Robert Newstead a packet of drugs which were brought to this country by Prof. J. L. Todd, and had been sent, together with Palabanda and other drugs from the district of Banana, to the late Dr. J. Everett Dutton, on the 17th February, 1904, by the Commandant Du Camp of the lower Congo, in response to enquiries by Dr. Dutton concerning native remedies against Sleeping Sickness. A further sample of the same drug was given to me in March, 1909, by Dr. J. W. W. Stephens, which had been sent by Dr. E. Etienne from the same district.

Macroscopic Characters of the Drug.

The material consisted of a piece of stem 22 cm. long by 3 cm. in diameter, together with leaf stalks and detached leaves, of the appearance of which fig. 1 gives a good idea.

The cortical portion which was readily removed from the hard woody portion had an astringent taste, followed by a persistent bitterness. No part of the drug had any characteristic odour. The outer layer of the cortical portion was velvety to the touch, longitudinally furrowed, with occasional transverse cracks, and

* Prosper H. Marsden: Notes on the Drugs of West Africa. Quarterly Journal of the Liverpool University Institute of Commercial Research in the Tropics, Vol. III, No. 6.

numerous transverse lenticels. This velvety layer could be easily removed by the finger nail, showing a dark red-brown hard bark beneath.

A transverse section of the stem showed the outer bark to be 1·5 mm. thick and the inner red-brown layer 3 to 4 mm. thick; in this could be seen many white dots, more numerous towards the inner side. The bark had generally a short fracture, with fine fibres showing at the site of fracture.

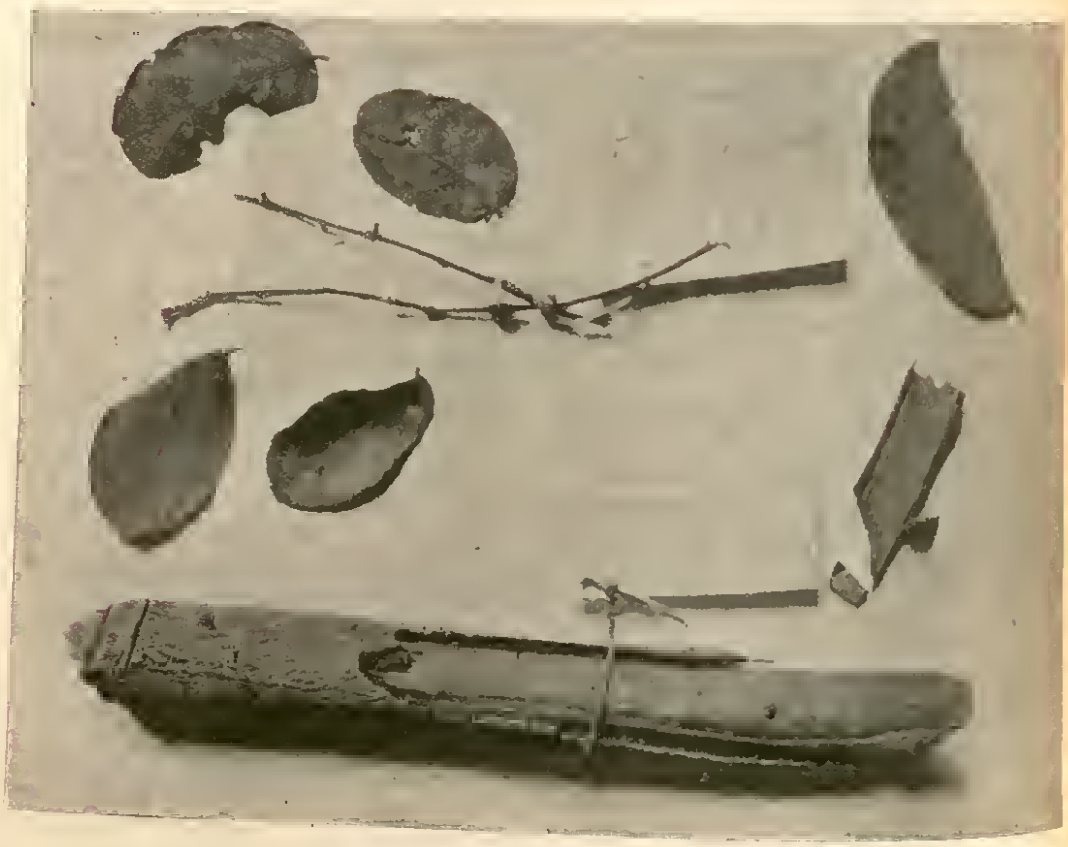

FIG. 1.—Leaves and stem of Muindu.

The wood, 2·5 cm. at the thickest part, was hard, yellowish-white with five rings and minute pith, and with a powerful lens the lacunae could be seen which are characteristic of the genus *Strychnos*.

As the bark of Muindu has some resemblance to that of the false Angostura Bark (*Strychnos Nux Vomica*, Lin.) described about half a century ago,† and both Muindu and Palabanda have something in common with Sassy Bark (*Erythrophloeum guineense*, Don.), it was thought that in view of the medicinal use of these an examination of Muindu might be of value.

The sample from Dr. Etienne consisted of three pieces of branches of the plant, which he described as a shrub growing in the plains. The largest of the branches was some 50 cm. in length by 2·5 cm. in diameter at the lower end, which had the velvety appearance of the older stem above mentioned. The younger branches were smoother, and had sharp thorns 5 mm. to 2 cm. long irregularly distributed upon them. There were no leaves with this specimen, but the thinnest branch had evidence of leaf scars, and was of the same colour and appearance as the leaf stalk of the Muindu received from Dr. Todd. A note by Dr. Etienne states that the natives scrape off the liber and macerate in treaty rum. Of this preparation a few drops are instilled into the eye for Sleeping Sickness.

A tincture was prepared from the bark by maceration in 60% alcohol of a strength of one drug in ten of menstruum. This was tested on frogs by Dr. C. O. Jones in the Department of Bio-Chemistry of the University with negative results.

This tincture was shaken out with ammoniated chloroform three times, and the chloroformic layer being allowed to evaporate to dryness gave a residue which upon treatment with sulphuric acid and potassium bichromate failed to give the usual reaction for strychnine.

Microscopic characters of the Bark of Muindu.

A transverse section of the bark showed that the velvety layer had an indefinite appearance.

The suber is formed of flattened thin-walled cells, the cortical parenchyme consists of polygonal cells having thin walls and intercellular spaces, and containing a brown material which gave the reaction for tannin with ferric chloride.

Although, as above mentioned, I was unable to obtain the reaction for strychnine from the tincture of Muindu, upon flooding a transverse

† Planchon et Collin. Les drogues simples d'origine végétale, Vol. I. p. 662.

section of the bark with sulpho-vanadic acid the customary violet coloration due to strychnine was afforded. This was not given by a similar section which had been well washed with an alcoholic solution of tartaric acid previous to irrigation with sulpho-vanadic acid.

In the parenchyme are found a number of groups of sclerenchyme with small lumen. These groups are more numerous towards the inner side, where they assume a quadrangular shape and are arranged very closely together (fig. 2). In longitudinal section these schlerenchymatous fibres are seen to be elongated longitudinally (fig. 3).

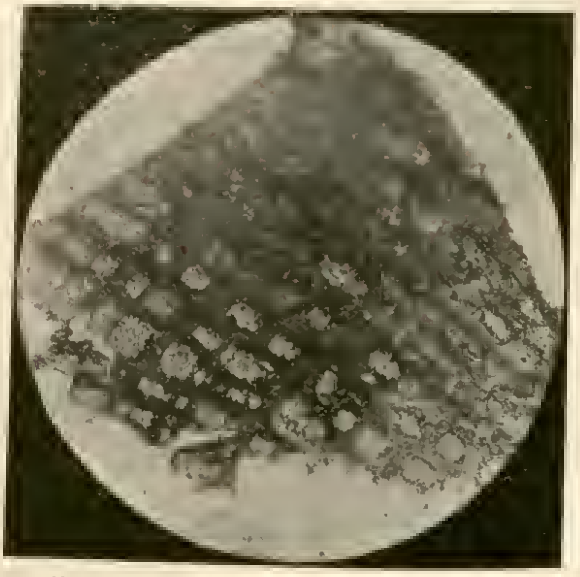

FIG. 2.—Transverse section of bark of Muindu.

Characters of the leaf of Muindu.

The leaves have not the character of those of the genus *Strychnos*, but as they were detached when received, it is possible that they are not from the same plant as the stem and branches. A photo-micrograph of the mid-rib of one of the leaves is seen in fig. 4, but in view of the statement of Dr. Etienne that the bark of the plant was the part used in medicine, the leaves were not further investigated.

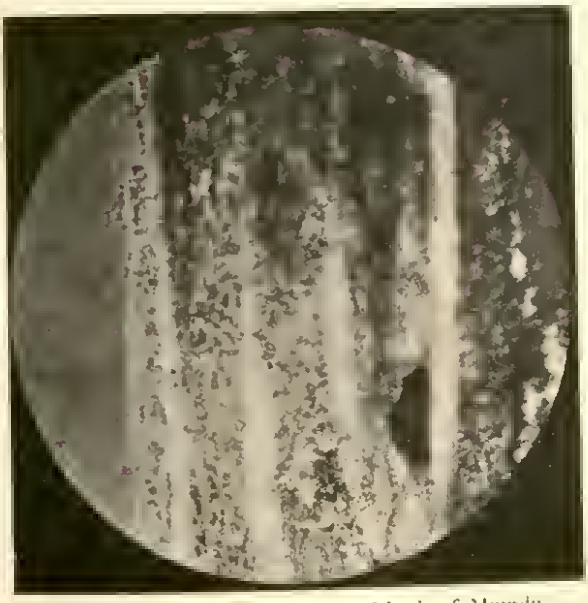

FIG. 3.—Longitudinal section of bark of Mumdu.

Fig. 4.—Transverse section of mid-rib of leaf of Muindu.